## Message

From: Sengco, Mario [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=4138218D625A4B6ABCD6C519817A6917-SENGCO, MARIO]

**Sent**: 8/4/2020 3:05:29 PM

To: Wirick, Holiday [wirick.holiday@epa.gov]
Subject: RE: hardness dependent metals calculator

Erica also said that the calculator I just forwarded you doesn't have copper because we no longer recommend the hardness-based copper equation. I think you could reconstruct it pretty easily if needed, but we can certainly help if needed.

## Mario

From: Wirick, Holiday <wirick.holiday@epa.gov>

Sent: Monday, August 03, 2020 5:41 PM

To: Sengco, Mario <Sengco.Mario@epa.gov>

Subject: hardness dependent metals calculator

Hi Mario, I hope you had a great weekend.

North Dakota plans to release its preliminary draft WQS for public comment within the next week or so.

So far the proposed revisions look good, but in the criteria table the state's proposing to change its hardness dependent criteria from 100 mg/L to 400 mg/L, which changes the aquatic life criteria values for cadmium, chromium III, copper, lead, nickel, silver and zinc.

Do you know whether EPA has a hardness dependent metals calculator? It would be helpful for me to use when checking the proposed revised AL values.

Thanks, Holly